



In this issue . . .

- Visitor facilities at four Nuclear Division areas are now officially open. ORNL Director Herman Postma cut the ribbon in recent ceremonies opening the Laboratory's Visitor Overlook(above), while hundreds of employees and guests attended an open house at the four facilities on May 15. Additional photos are found on page 5.

Other features:

Paducah secretaries announce awards..... page 2

ORGDP Engineering appointments..... page 2

Recreation page 6

Medicine Chest..... page 7

Question Box

Insurance retirement problems

QUESTION: I retired on October 1, 1981, and enrolled at that time in the Major Medical Medicare Supplement Plan. The normal deductions were made from my pension the first three months, but then in January, February and March there was a deduction for four months' premiums each month (\$86 instead of \$21.50). I have told the Benefit Plans Office and the Payroll Department about this, but it is still going on. What can I do?

ANSWER: A number of retirees have reported that duplicate deductions have been made in recent months. The problem is in connection with transmission of premium deduction information from the Corporate Benefit Plans Department to the Prudential Insurance Company for entry into the computer. Every effort is being made to correct the condition, and we hope a solution is near. In the meantime, all retirees are asked to check all deductions being made from their pension checks and report any mistakes to the Benefit Plans Office at their installation. Refund checks are being prepared locally and will be distributed to the individual retirees affected where significant amounts of money are involved.

QUESTION: I recently retired with a sizable amount of money in the Carbide Savings Plan Fixed Income Fund. After retiring, I was informed by Benefit Plans that interest on this money stops the day an employee terminates and that I can't get my money out for 60 to 90 days. This is costing me a lot of money, and as a retiree I can't afford it. Is there anything that can be done about this situation?

ANSWER: The information you were given wasn't quite correct. The Savings Plan is closed out at the end of the month in which the retirement notice is received in the Savings Plan Office, with the settlement check being mailed about the 25th of the following month. If the notice is received after the retirement date, the account continues in an active status until closed. For example, if you retire on July 1, but the information doesn't reach the Savings Plan Office until July 10, your account would remain active until July 31 and your investments valued as of the end of July. You would receive your settlement about 25 days later; so, instead of 60 to 90 days, your money is "idle" only about 25 days. Studies are under way to see if this period can be shortened.

ORNL sets new safety record for Union Carbide facilities

Employees at ORNL reached a major safety milestone this month — the completion of two full years without a lost-time accident. This accomplishment sets a new standard, not only for the Nuclear Division, but for all Union Carbide facilities.

Earlier in May, employees at the ORNL site accumulated 17,000,000 hours of work without a lost-time accident, almost twice as many as the previous best record at the Laboratory. This is another new record for the Corporation, exceeding the previous total of 16,978,622 hours set by employees at Y-12 in 1974.

ORNL also has received the National Safety Council's first-place award for research and development laboratories as the safest laboratory reporting to the Council, and has qualified to become the first individual installation to receive Carbide's Gold Safety Award, given to facilities whose employees complete 16,000,000 hours of work without a lost-time accident. These awards, as well as additional ones from DOE/ORO, will be formally presented later this year.

According to ORNL Safety Director Michael W. Knazovich, the safety record is a reflection of the efforts of "every single employee, and not just of a specific department or division. This is quite a significant achievement, and one of which all employees may be extremely proud," he said.

In congratulating ORNL employees, Laboratory Director Herman Postma urged them to "carry these safety habits to all of your off-the-job activities; work toward educating your family and friends about the safety practices that you have learned and used so well on the job; and continue to strive to exceed, committed to even greater records and honors and safe working conditions for all employees at the Laboratory."

Safety Scoreboard

Time worked without a lost-time accident through May 20:

Y-12 Plant.....	125 Days	4,718,000 Employee-Hours
ORGDP	98 Days	2,428,667 Employee-Hours
ORNL	740 Days	17,318,082 Employee-Hours
Paducah.....	660 Days	5,699,000 Employee-Hours

Changes affect ORGDP traffic

Major changes in traffic flow on Highway 58, east of ORGDP, began earlier this month, according to representatives of the State Highway Department.

Two lanes of Highway 58 near the intersection have been closed for construction. Travel on Highway 58 is limited to two lanes in that area.

Traffic flow will be reduced, causing some delays and inconvenience. Merging into a single lane in this area creates a potential hazard, and officials urge motorists to slow down and use extreme caution while driving in this congested area.

DOE has also announced the closing of the one-lane bridge on Blair Road across Poplar Creek. The military-type bridge was constructed in 1946 and connects the Oak Ridge Turnpike with State Highway 61. The bridge was closed May 15 with barricades on each side and appropriate signs in the area for aiding motorists in traffic direction.

Traffic is being diverted to Perimeter Road, which connects the Oak Ridge Turnpike just west of ORGDP's main entrance with Blair Road immediately north of the bridge. Perimeter Road previously has been limited to "official use only" traffic.

The State, Roane County and the City of Oak Ridge have been notified of the bridge's closing. No determination has been made on the future of the bridge and long-term handling of traffic on Blair Road.



C. Nadie Vance



Clayton D. Zerby

Paducah secretaries honor boss, secretary of the year

The Paducah Plant swept the honors at the Paducah-Kentucky Lake Chapter of Professional Secretaries International's (PSI) executive night banquet recently. C. Nadie Vance, secretary to Carl W. Walter, Technical Services Division manager, was named the secretary of the year and Clayton D. Zerby, Paducah plant manager, was voted boss of the year.

Vance graduated from St. Mary's Academy and Draughton's Business College. In 1977, she received her CPS rating and this semester received an associate degree in business management from Paducah Community College.

For the past five years, Vance has been employed at the Paducah Plant. She has been a member of PSI since 1977 and serves as chairman of the public and world affairs committee. She is also a charter member of the National Association of Women in Construction, and is presently serving as recording secretary and chairman of the organization and extension committee.

She and her husband, Jim, have one son.

Zerby holds a bachelor of science degree in mechanical engineering, a master of science degree in physics and a doctorate in physics. He is a member of the American Physical Society, American Nuclear Society and Sigma Xi.

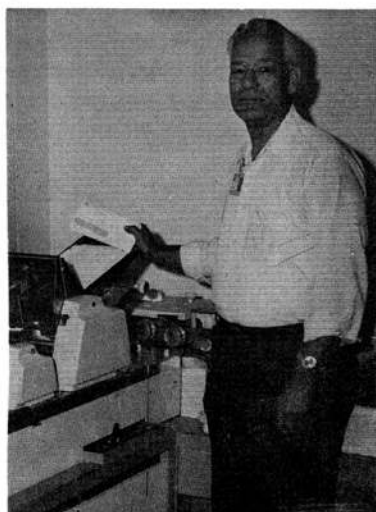
He serves as a member of the board of trustees at Paducah Community College, the industrial advisory council in the College of Engineering at Southern Illinois University, the state advisory council of the Future Business Leaders of American and Phi Beta Lambda.

Zerby has served two years on the board of directors of the Paducah Rotary Club, is the current president of the Paducah Area Chamber of Commerce and services as chairman of the Paducah Area Transit Authority. He was appointed in 1980 by Governor John Y. Brown to the Kentucky Legislative Committee on Nuclear Issues.

He and his wife, Pat, have three children and two grandchildren.

UNION
CARBIDE

Published every other week
for employees such as:



Walter E. Prater, ORGDP
Payroll Department

Nuclear Division News

UNION CARBIDE CORPORATION
NUCLEAR DIVISION
Post Office Box Y
Oak Ridge, Tenn. 37830

EDITOR (Y-12)
James A. Young, 574-1643

ASSOCIATE EDITOR (ORNL)
Cindy Ross Lundy, 574-4163

ORGDP
Ruby A. Miller, 574-8092

PADUCAH
Ann J. Erwin, Bell 368



INTERNATIONAL ASSOCIATION
OF BUSINESS COMMUNICATORS

ORGDP Engineering appointments told

Three appointments have been announced in the Engineering Organization at ORGDP. Bryant B. Bowden is manager of Mechanical Engineering; M. Fran DeLozier is manager of Multi-Site Gaseous Diffusion Projects; and Terry C. Domm is head of the Development Engineering Department.

A native of Lenoir City, Bowden received his bachelor's degree in mechanical engineering from the University of Tennessee, graduating with high honors. He has also done graduate study toward a master's degree in industrial engineering and management.

Bowden first worked in the Nuclear Division in 1964 as a co-op at the Y-12 Plant. He joined the staff full-time in 1968, serving in various capacities in Y-12's Mechanical Design Engineering Department. In 1976, he was named to his most recent position as head of the Gas Centrifuge Mechanical Engineering Department at ORGDP.

Bowden is a member of the American Society of Mechanical Engineers, the Tennessee Society of Professional Engineers (TSPE) and the National Society of Professional Engineers (NSPE). He and his wife, Patricia Tuck Bowden, live at Route 1, Lenoir City, with their two children.

DeLozier is a native of Pittsburgh. She received her BS degree in chemical engineering from Carnegie-Mellon University and her MS degree in engineering administration from the University of Tennessee.

She joined the Nuclear Division in 1972 and has held various positions at ORGDP, including supervisor of production analysis and the operations engineering section, and coordinator of operations for the Process Equipment Modification/Cascade Uprate Program. Since joining Engineering in 1979, she has served as manager for a number of significant multi-site capital construction projects.

DeLozier is a member of the Oak Ridge Chapter, TSPE; the American Institute of Chemical Engineers; and the Society of Women Engineers. She and her husband, Randall, live with their daughter on Naraca Drive in Knoxville.

Elaine Cole dies at Knoxville home

Elaine B. Cole, a technical publications analyst in the ORNL Biology Division, died May 13 at her home at 7587 Glastonbury Road, Knoxville.

Mrs. Cole, a 15-year Carbide employee, was founder of the Lochaven Society for the Preservation of Animal Life.

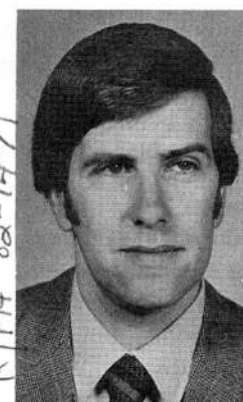
Survivors include her husband, D. Stanley Cole. Funeral services were conducted at Steven's Mortuary Chapel in Knoxville.



Bowden



DeLozier



Domm

Domm was born in Chicago Heights, Ill. He received his BS and MS degrees in mechanical engineering from Georgia Institute of Technology.

Domm joined the Nuclear Division in 1972 after working for the Tennessee Valley Authority and serving in the U.S. Army. He has held various positions in support of both gaseous diffusion and gas centrifuge projects at ORGDP. Most recently he was head of the centrifuge design section in Development Engineering.

Domm is a member of the NSPE and a state director of the Tennessee Society of Professional Engineers. In 1979, he received the Oak Ridge Chapter, TSPE's "Young Engineer of the Year Award."

He and his wife, Betty Anne, live on Ithaca Lane in Oak Ridge, with their two children.



Mrs. Cole

Y-12ers earn QA recognition

Quality Assurance Recognition Awards have been presented to seven Y-12 employees whose innovative ideas, developments, or alertness have improved production capability, avoided quality failure or saved time and money.

Gordon G. Fee, Y-12 Plant Manager, presented the honors during a Quality and Productivity meeting held on April 21. Following are the names of the award winners and contributions for which they were cited.

• **Clifford Tate**, Assembly Division. While performing his duties, Tate noticed what appeared to be a flaw in a component part. Although the part had been certified, Tate felt the flaw made it unacceptable and immediately notified his supervisor. Inspection revealed that the part was cracked and might have caused serious consequences if it had been used. "Tate's alertness exemplifies the quality concept of fitness for intended use and the requirement for each employee to be as concerned with quality as with any other phase of his/her job," Fee said.

• **John B. Stephens, William H. Moehl and Bob Giles**, Product Certification Division; and **Greg A. Sheppard**, Development Division. After evaluating several traditional and nontraditional nondestructive methods for determining the composition of binary alloys, this team found that a radiographic technique, known as X-ray fluorescence, was a much better method. The success of this testing method will save an inestimable amount of money and will provide greater assurance of the quality of a major Y-12 material stream.

• **Earl H. Barton and Brice M. Burrus**, Quality Division. This team developed a new method for calibrating tilting rotary tables. They designed and procured a six-sided polygon. The surface of each face was ground, hand-lapped to a mirror finish and to an angular accuracy of 1/2 second. The polygon, which replaces an autocollimator, resulted



QA RECOGNITION — Gordon G. Fee, Y-12 Plant manager, presents a plaque to Clifford Tate whose conscientiousness in reporting a product abnormality which ensured that a quality failure did not occur.

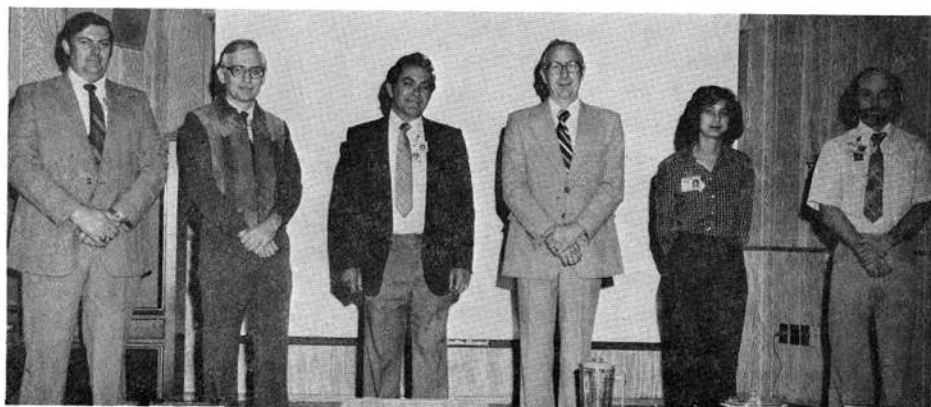
in a 50 percent time saving with no loss in accuracy.

Barton was also recognized for his effort to improve the capability of supermicrometers in the Dimensional Standards Laboratory. He incorporated the use of an analog digital readout which improved system measurement resolution from 20 millionths to 4 millionths of an inch. His system provides for both English and metric readouts, reducing the time required to obtain and interpret inspection results even further.

Patents

James S. Johnson and Clyde G. Westmoreland, both of ORNL, for "Sacrificial Adsorbate for Surfactants Utilized in Chemical Floods of Enhanced Oil Recovery Operations."

Carlos E. Bamberger, ORNL, for "Thermochemical Cyclic System for Decomposing H₂O and/or CO₂ by Means of Cerium-Titanium-Sodium-Oxygen Compounds."



SAFETY SUGGESTIONS — Employees in the Process Support, Technical Services and Advanced Isotope Separation Divisions at ORGDP participated in a contest designed to get program suggestions for formal safety meetings. Winners, from left to right, and their suggestions are: Ray D. Foley and Gerald V. Pierce for "poison hazards in the home"; Jack Gresham for "Tennessee emergency teams"; Gordon M. Lindner for "hearing loss and protection"; Rhonda S. Lay for "choosing an appropriate exercise programs"; and Randy Gilreath for "severe weather and tornado safety."



TEAM EFFORT — Y-12 Plant Manager Gordon G. Fee is shown with members of a team whose innovative idea saved money and provided a greater assurance of quality in evaluating the composition of binary alloys. From left are Greg Sheppard, John Stephens, Fee, Bill Moehl and Bob Giles.



TWO-TIME WINNER — Earl Barton and Brice Burrus were presented plaques by Gordon G. Fee for reducing the calibration time for tilting rotary tables in the Dimensional Standards Laboratory. Barton, left, was also recognized for adapting an analog digital readout system to improve the capability of supermicrometers in the Laboratory.

Auerbach named to research council post

Stanley I. Auerbach, director of the Environmental Sciences Division at ORNL, has been appointed to a newly created Commission on Physical Sciences, Mathematics and Resources of the National Research Council.

Auerbach will serve a one-year term on the commission, which will be concerned with the health and progress of the physical and chemical sciences, sciences of the atmosphere, oceans, earth and its resources, space and planetary sciences, and mathematics. The NRC is the principal operating agency of the National Academy of Sciences and National Academy of Engineer-



Auerbach

ing, and serves as an official advisor to the federal government on matters of science and technology.

Recent Retirements



Charles R. Good
Maintenance
ORGDP
16 years service



Virgil J. Silver
Barrier Manufacturing
ORGDP
37 years service



James E. Breeding
Operations
ORGDP
37 years service



James F. Mooney
Maintenance
ORGDP
36 years service



Ralph Lawson
General Machine Shop
Y-12
31 years service



Edwin P. Warrington
Maintenance
ORGDP
36 years service



Charles E. Carrigan
Transportation
Services
Paducah
29 years service



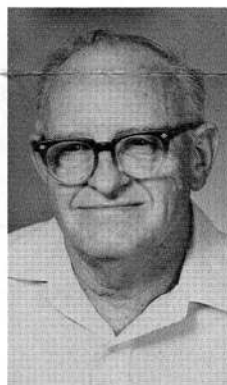
Linda E. Carrigan
Maintenance
Paducah
29 years service



Fletcher F. Keylon
Maintenance
ORGDP
37 years service



Robert C. Wenzel
Construction
Engineering
Paducah
34 years service



Earl A. Tweed
Barrier Manufacturing
ORGDP
28 years service



Glendon T. Miller
Process Maintenance
Y-12
30 years service



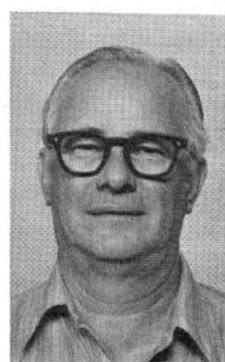
Eldron R. James
Plant Services
Paducah
29 years service



John A. May Jr.
Operations
ORGDP
37 years service



William W. Ivey
Production Radiation
Testing
Y-12
26 years service



Forrest M. Blaine
Power, Utilities and
Chemicals
Paducah
29 years service

Patents

Jimmy T. Bell, Phillip C. Arwood, James C. Mailen and Othar K. Talient, all of ORNL, for "Method of Removing Pu(IV) Polymer from Nuclear Fuel Reclaiming Liquid."

Dennis L. McCorkle, James G. Carter, David V. Maxey and Loucas G. Christophorou, ORNL, for "Gas Mixtures for Gas-Filled Radiation Detectors."

Named fire and guard captains in Y-12

James Fain and Kenneth E. Grissom have been named fire and guard captains in the Y-12 Security and Fire Protection Department.

Fain, a native of Knoxville, joined Union Carbide in 1971 and was named a lieutenant in 1979. He was with the C. M. McClung and Company before that time.

Mrs. Fain is the former Denota Walker, and they live at 3332 Lay Avenue, Knoxville, with their two children.

Grissom was born in McMinnville, and holds a BS degree from Middle Tennessee State University and an associate degree in fire science technology from Roane State Community College. He is a member of the U.S. Army Reserve Officers Association and the Oak Ridge Civil Defense



Fain



Grissom

group. He was a track coach at the Oak Ridge High School and a fireman with the city of Oak Ridge before joining Union Carbide in 1977.

He and his wife, the former Marsha McLaughlin, live at 105 Thayer Lane, Oak Ridge. They have one son.

Anniversaries

ORNL

35 YEARS

Frank L. Rogers, Chemical Technology; and Blaine E. Thomas, Finance and Materials.

Carl B. McMillian, Plant and Equipment; O. Harvey Sharp, Operations; James S. Kerns, Plant and Equipment; Harry C. Hoy, Engineering Technology; and Robert Smith Jr., Engineering Technology.

30 YEARS

Richard W. Ladd, Plant and Equipment; William D. Burch, Fuel Recycle; O. E. Schow III, Solid State; Gene D. Harrell, Plant and Equipment; Wayne W. King, Instrumentation and Controls; Everette Beckham, Engineering Physics; Willard D. Box, Chemical Technology; William B. Grisham, Operations; John W. Hunley, Plant and Equipment; Fred W. Holtzclaw, Plant and Equipment; James L. Crowley, Engineering Technology; Frances M. Burkhalter, Information Services; Thomas G. Hill, Engineering Technology; Eugene H. Waters, Analytical Chemistry; and Charles S. Williams, Computer Sciences.

Alva C. Duncan, Finance and Materials; Juel E. Emery, Analytical Chemistry; Rollins E. Helms, Operations; Sigfred Peterson, Metals and Ceramics; J. C. Price, Analytical Chemistry; Walter G. Whatley, Plant and Equipment; Anthony J. Caputo, Metals and Ceramics; Garnett V. Justice, Plant and Equipment; Wallace R. Gambill, Chemical Technology; James W. McNeillie, Instrumentation and Controls; Wilbur F. Schaffer Jr., Fuel Recycle; John L. Redford, Instrumentation and Controls; Jay W. Reynolds, Instrumentation and Controls; James S. Brown Jr., Industrial Safety and Applied Health Physics; John W. York III, Chemical Technology; William E. Thomas, Engineering Technology; George D. Howell Jr., Operations; David M. Eissenberg,

Engineering Technology; Bill K. Norris, Information Services; David R. Alford III, Fusion Energy; and Loyd V. Wilson, Engineering.

25 YEARS

Hubert L. Brant, Bruce C. Finney, Morris H. Slabbekorn Jr., Ted S. Lundy, L. Eugene McNeese, William T. Milner, James P. Turner, Robert W. Swindeman, Edwin H. Krieg Jr. and Deborah J. Webster.

Harold F. Keesee, Jerry N. Brantley, Gerald B. Young, Robert T. Santoro and William C. Ulrich.

20 YEARS

James L. Ford Jr., John P. Witherpoon Jr., James T. Atherton, Carl W. Reirdan, Gladys M. Warren and Claude D. Stringer.

Ralph D. Porter, Richard L. Hahn, Donald S. Asquith, Kenneth W. Donham, Calvin E. Foust, Billy G. Foutz, Anthony P. Malinauskas and Patricia C. Gooch.

Y-12

35 YEARS

Frances M. Smith, Accounting and Budget; Robert T. Rose, Tool Department; and David L. Brashears, Chemical Services.

30 YEARS

Clifford A. Moore, Utilities Administration; Otis M. Vermillion, Chemical Services; Joe A. Wallace, Buildings and Grounds; and Thomas C. Little, E-Wing Casting.

25 YEARS

Riley Goodman and Wofford H. Akers.

20 YEARS

Jesse K. Cordell, Turley M. Copeland and Andy Loy Jr.

ORGDP

20 YEARS

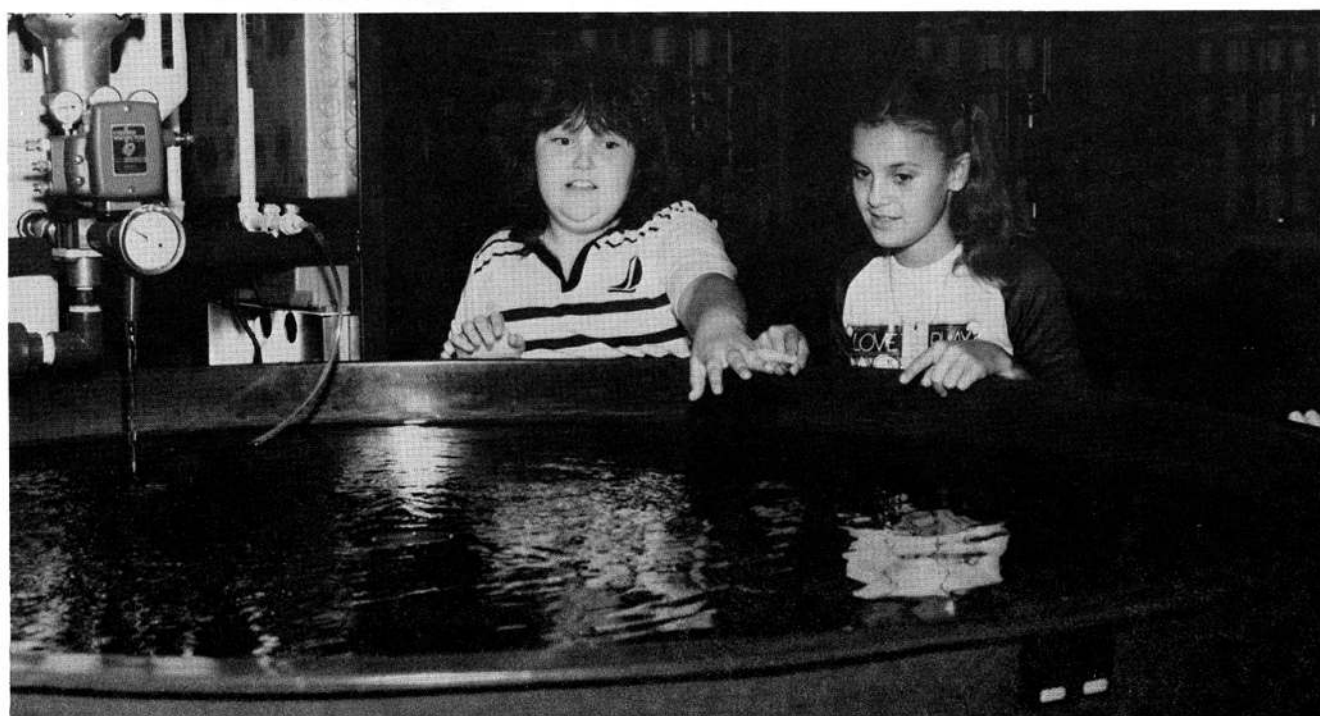
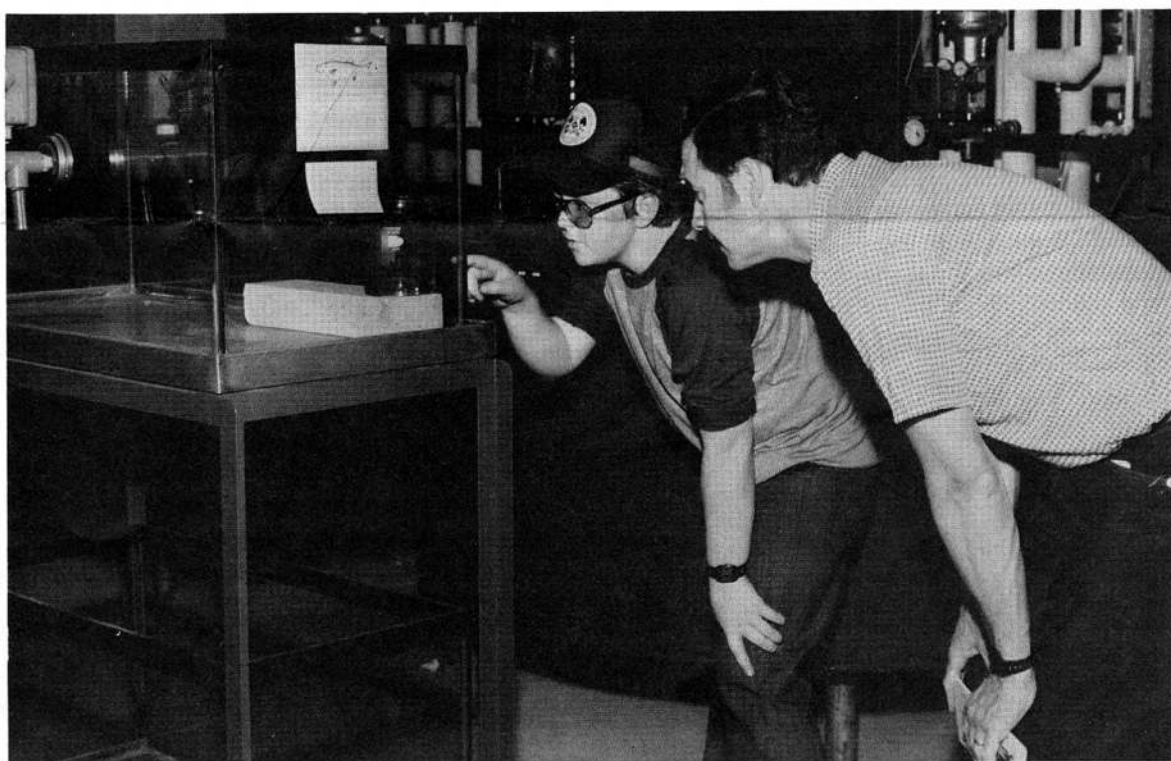
Anthony F. Poche and Bruce E. Williams.

Employees, families tour Division visitor sites

Several hundred employees, family members and other guests toured four Nuclear Division visitor sites during the May 15 open house. Areas open to visitors included the ORNL and ORGDP Visitor Overlooks and the Graphite Reactor and Aquatic Ecology Laboratory at ORNL.

Visitors viewed audiovisual programs and other exhibits, received informational brochures, chatted with guides and even tested their skills on the master/slave manipulators found in the Graphite Reactor (below).

Visiting hours for the four areas are 9 a.m. to 4 p.m. Monday through Saturday and noon to 4 p.m. Sunday for the duration of the World's Fair period.



Tee-Off Time Application for

June 19, 1982

(Check Appropriate Plant)

- ☐ Y-12—Wallace Hills
☐ ORNL—Southwest Point
☐ ORGDP—Dead Horse Lake

Time Preferred _____

Leader 1. _____
 2. _____
 3. _____
 4. _____

COMPLETE AND RETURN TO THE Y-12 RECREATION OFFICE
 Y-12 — BUILDING 9711-5, MS-1

Entries must be received prior to drawing on June 16, 1982.

Tee-off times for all tournaments will be drawn on Wednesdays prior to each Saturday's tournament. Please call the Recreation Department, 4-1597, after 8:00 a.m. Thursday for time.

Employee Relations picnic set June 18

The three Oak Ridge plants' Employee Relations Divisions are planning a summer picnic, Friday, June 18 at the Clark Center Recreation Park. The theme is "It's more fun than a fair...you got to be there."

It begins at 5 p.m. and will extend until 10 that evening. Tickets are available throughout the divisions in the plants.

Summer league forms —

Attention bowlers! Maintain or improve your average over the summer months by bowling in the UCC Monday Mixed Summer League at Western Plaza Lanes. Take advantage of the special summer rate (only \$3 per night) by calling Dean Treadway at 4-6580 and signing up today. League forms Friday, June 4.



SWEET ADELINES — The Oak Ridge Chapter of the Sweet Adelines will perform June 5 at the Knoxville World's Fair, along with 270 other singers from all over Tennessee. Singers with Carbide connections include, from left on the front row, Ruth Kerr, Effie Loback, Carolyn Stelzman, Phyllis Shepard and Ruth Roberts. In the second row are Eleanor Agron, Sarah Johnson, Marge Bush and Mary Loveless. In the third row are Joan Nicholson, Ruth Ann McIntyre, Jane Bridges and Betty Woods. In the rear are Arids Leichsenring, Audry Johnson, Violet Kendig, with Vi Haire not pictured. The group will perform well-known regional and national songs to delight fair-goers.



SEASON CHAMPS — The Net Crushers pulled off the best record of an eight-team field during Paducah's regular-season volleyball action. The team sported a 21-7 record. They are, front from left, Carol Page, Dave Dummer, Jeff Oakley and Erskine Bennett. In the back row are Larry Heavrin, Ron Smith and Mike King.

Bowling alley notes...

Monday Mixed...

The Pacesetters took the second half of the UCC Monday Mixed League only four points ahead of the Go-Getters, who won the season's first half. They recently squared off for the rolloff.

Mike Emery rolled a 649 scratch series the final night of bowling; and Cheryl Womack almost matched it on the women's side with a 627. In singles it was Church Moore, 252; and Jewell Mathews, 255. Mathews' 655 handicap series proved to be the season's high. Wayne Bell rolled a 282 handicap single on the final night, proving that the last night of rolling sometimes is the best.

UCC Mixed...

The Scalawags downed the Squeakers in the rolloff for the Y-12 UCC Mixed Bowling crown recently, 2518 pins to 2294. The Scalawags took the last half crown, the Squeakers won the first half. John Goan rolled a 603 scratch series in the rolloff and was named the league's most improved player, increasing his average by 16 pins during the season. Bonnie Cooper was named the season's most improved woman bowler, hiking her average by 13 pins. Highest women bowlers for the year were Mary Goldberg, highest average with 177; Linda Burnett, highest scratch series, 607; and Burnett and Stephanie Livesay, highest single game, each 234. On the male side it was Dave Mosley with the highest series of 619 and Chuck Jones with a high 256 scratch game! Bill Jago carried the highest average, with 178.

I&C picnic June 19

ORNL's Instrumentation & Controls Division will have a family picnic on Saturday, June 19, at Clark Center Recreation Park. The program will begin at noon, with games for children of all ages beginning at 1 p.m. Prizes will be awarded. Special attractions will include a dunking booth and a craft display table. The meal will be served at 4 p.m. and will consist of a chicken and ham dinner, as well as drinks and dessert.

All division employees and retirees are invited to attend. Information about tickets and reservations may be obtained from Lorry Ruth (4-4771) or Virginia Farris (4-0335).

Y-12 C League...

The Badgers took the crown in the Y-12 C Bowling League, with the Mini-Strikes a close runner-up. John Patton rolled the highest scratch series of the year, a 726; while Jeffrey L. Stassin rolled a high 268 scratch single. Highest averages went to Jim Hummel and Philip Manos, each with 191.

ABC awards went to Alvin J. Norris and Kenneth Brown, triplicates; 150 pins over average...Charles D. Atkins and John T. Patton...and 100 pins over average to Winfred E. Shoopman for his 246 scratch game.

The most improved average award went to William E. Johnson, who raised his average from 163 to 177. Leonard Miller was a close runnerup with an increase from 156 to 170 pins.

Next issue...

The next issue will be dated June 10. The deadline is June 2.



Medicine chest

Determining effects of 'passive smoke'

by T. A. Lincoln, M.D.

(Editor's Note: Dr. Lincoln alternates his regular column with "The Medicine Chest," where he answers questions from employees concerning health in general. Questions are handled in strict confidence, as they are handled in our Question Box. Just address your question to "Medicine Chest," NUCLEAR DIVISION NEWS, Building 9704-2, Stop 21, Y-12, or call the news editor in your plant, and give him or her your question on the telephone.)

QUESTION: A reader recently disagreed with a "Question Box" response that sitting or working near people who smoke was not hazardous. This reader explained that many scientific studies have linked involuntary (passive or secondhand) cigarette smoke exposure to adverse health effects. A response in the May 13 issue of *Nuclear Division News* contained the following statement: "Dr. Tom Lincoln, UCC Medical Director, has agreed to address the question of 'passive smoke' in one of his future Medicine Chest columns."

ANSWER: Many studies have claimed to show harmful effects from passive smoking. Such effects include impaired pulmonary function, increased levels of carbon monoxide in the blood, increased frequency and severity of respiratory infections in children and an increased risk of lung cancer.

Recent studies

There are many problems in these studies, but one of the greatest is the difficulty in determining the true amount of exposure to tobacco smoke in nonsmokers. In the recently released report, "Health Consequences of Smoking," by the U.S. Depart-

ment of Health and Human Services, it was emphasized that an individual's actual level of smoke exposure over long periods is extremely difficult to quantify. "Damage is dependent upon the amount of smoking by those around the nonsmoker, the spatial distance between the nonsmoker and smoker, the duration and frequency of exposure, and a number of other factors," the report said.

If numerous studies determine that there probably is an adverse health effect on nonsmokers who are involuntarily exposed to tobacco smoke, the question then becomes, "How much smoke exposure is necessary to cause the effect?" Accurately determining this level is a great challenge to an investigator. If one could equip a large group of nonsmokers with very sensitive personal exposure meters for many weeks and carefully analyze the results, reasonable estimates might be developed. One would then need to observe the members of the group for many years and document their disease histories. Such a study, even if technically feasible, would be exceedingly expensive. Therefore, we are left with studies that are defective in some areas but are the best we have.

One also must remember that in comparing an "exposed" population with a "non-exposed" or control population, the two groups should be as nearly identical as possible, except for amount of exposure. Such an ideal, however, is never possible in human studies. Many subtle differences may exist, such as age, diet, quality of housing, use of drugs and alcohol and many other factors. These are called "potentially confounding variables," because they also could influence the prevalence of disease in nonsmokers.

Evidence accumulates

Regardless of these limitations to the studies, evidence that passive smoking is potentially harmful is accumulating. A report on a recent study to quantify passive exposure to tobacco smoke appeared in the May 2, 1980, issue of *Science*. The authors measured respirable suspended particulates (RSP), which show the amount of microscopic particles of smoke suspended in the air, in several common indoor environments. They studied the influence of ventilation, the number of air changes per hour, the number of smokers in a room and the rate of adsorption of RSP on clothing and furniture. They found that a nonsmoker who works in an average office (with a 40-cubic-meter volume) with two other workers, one

of whom is a habitual smoker, inhales the equivalent of approximately five cigarettes per day.

It is reasonable to conclude that non-smokers who live and work with smokers can inhale a great deal of tobacco smoke in their lifetimes. This hazard increases with the amount of exposure. It is therefore likely that standards eventually will be developed for the allowable amount of tobacco smoke exposure in public places. Because of the energy costs associated with increased ventilation, the only way to maintain sufficiently low levels will be to ban smoking.

Smokers may claim their "constitutional" right to smoke, but they also may find that the number of places where they can exercise that right will rapidly decline.

Passive smoke effects

If one has doubts about the toxicity of passive smoke, I suggest that he or she ride for an hour in a commuter train "smoker" car. The person's eyes and nose will burn, the heart rate will increase and an uncomfortable feeling will persist for several hours afterward. The person's clothing also will reek with the odor of stale tobacco smoke for the rest of the day.

Excessive exposure to passive tobacco smoke is clearly undesirable. Modest exposure probably represents only a minimal hazard.

Save Energy / Share The Ride

ORNL

VAN POOL RIDERS NEEDED from Walker Springs area (Sans Souci, Plantation Manor, Wesbridge, Brendon Park and Crestwood Hills) to any portal, 8-4:30. Mike, plant phone 4-4885; home phone 691-4194.

VAN POOL RIDERS NEEDED from Sutherland Avenue and Papermill Drive area to ORNL, 8:15-4:45. D. P. Atkins, plant phone 4-5463; home phone 584-3766.

RIDE NEEDED from Oak Ridge Highway between Karns and Solway to East Portal, 8:15-4:45. Peterson, plant phone 4-4483; home phone 690-3989.

CAR POOL MEMBER WANTED from Sutherland Avenue, Forest Heights (Knoxville) area to East Portal, 8-4:30. S. L. Wyatt, plant phone 4-4165; home phone 584-4839.

Y-12

RIDERS from Brendon Park/Cedar Bluff area to East or North Portal, 7:45-4:15 shift. John Tetrykowski, plant phone 4-0568; home phone Knoxville 690-6566.

RIDE from Jefferson City to Bear Creek Portal, 8-4:30 shift. Helen

Whitman, plant phone 4-3657; home phone Jefferson City 457-5923.

SHARE A RIDE from Walker Springs Road area to Pine Ridge Portal, 7:30-4. Bill Grove, plant phone 4-1944; home phone Knoxville 691-1273.

FOURTH CAR POOL MEMBER from Farragut/Dixie Lee Highway Junction to Central or North Portal, 8-4:30. Ed McBay, plant phone 4-2456; home phone Knoxville 966-7725.

ORGDP

CAR POOL MEMBER WANTED from Cedar Bluff - Walker Springs area north of I-40, to Portal 2 and K-1007, 7:45-4:15. Call George, plant phone 6-0506; home phone 690-6856.

Patents

John E. Van Cleve Jr., Sue M. Tiegs, Melvin G. Willey and Lloyd J. Turner, all of ORNL, for "Method for Fracturing Silicon-Carbide Coatings on Nuclear-Fuel Particles."

Richard M. Coleman, Stephen K. Holshouser, Gus T. Cook, Walter N. Whinnery and Charles E. Harless, all of Paducah, "Method of Removing Polychlorinated B-phenyl from Oil."



135 YEARS OF SAFETY — A number of employees in Paducah's Maintenance Division have cumulatively recorded 135 years of safe work without any injury. The employees recently received a framed certificate recognizing their achievement of injury-free experience. In the front row, from left, are Willie Garrison, Kenneth Sigers, Edwin Hoskins, James Galloway and Benjamin Blakely. In the rear are Jesse Barron, John Weglarz, Charles Stone, Ray Perry, Jeep Charvat and Donald Dowdy.

ORGDP employees assist area agencies



Engineering picnic set for June 5

"50's Beach Party" is the theme of Engineering's annual picnic planned for Saturday, June 5, from 9 a.m. to 6 p.m. at the Clark Center Recreation Park.

The feast will include a steak sandwich, corn on the cob or potato chips, tossed salad, ice cream or watermelon, and a choice of beverage. A kids' plate will include a hamburger or two hot dogs for the main course. Meals will be served from noon to 6 p.m.

The featured entertainment will be music by "Dancers", a car show of 50's vintage automobiles, a fashion show by "A Touch of Class Fashions", The Performing Arts Dance Center and a presentation of "Camelot" by the Oak Ridge Playhouse.

There will be sporting events such as the softball tournament, the 5000-meter run, hole-in-one contest and a volleyball tournament. Participants can also be challenged by the hula-hoop contest, Volkswagen stuff, chug-a-lug contest or the 50's dance contest.

The children won't be left out, because they can ride ponies or the Kern's merry-go-round. There will be an Art Festival and organized games with prizes and awards.

Ticket prices are \$3 for adults and \$1.50 for children.



(TOP TO BOTTOM:)

THANKS TO ORGDP EMPLOYEES — Members of the ORGDP Aluminum Can Salvage Program committee met recently to discuss the sale of nearly 2300 pounds of aluminum cans that were collected and saved by employees at ORGDP since last December. Sale of the cans netted almost \$500, which was contributed to two local rehabilitation centers for their children's programs. Committee members are, from left, Sue Phillips, Maintenance; Donald Lawson, Operations; Mike Walls, Security and Plant Protection; Dennis Leach, Operations; Larry Johnson, Wendell Keener and Sallie Tinker, Maintenance; Barbara Boatwright, Finance, Materials and Services; Roger Lankford, Employee Relations; and Barney Schaefer and Charlie Duncan, Maintenance. Members not shown are John Woody and Al Mann, Maintenance.

TO DANIEL ARTHUR — The contribution made by employees at ORGDP from the sale of aluminum cans will help purchase equipment for children like little Johnny Martin, who is shown here with his physical therapist, Karen Allsbrooks, at the Daniel Arthur Rehabilitation Center in Oak Ridge.

ON BEHALF OF MICHAEL DUNN — Barbara Boatwright, Finance, Materials and Services Division, presents a check to Eileen Harris, executive director of the Michael Dunn Rehabilitation Center, as Lem Hill, Children's Program Coordinator; and Dennis D. Leach, ORGDP Maintenance, look on.



Exercise tips —

Dieting? Here are some suggestions for "unprogrammed" exercise to help you shed those excess pounds:

- Climb the stairs to your office or workplace instead of using the elevator or escalator.
- Park your car two or three blocks away and walk to home, office, shop or laboratory.
- Go upstairs to answer the bedroom phone if you're downstairs when it rings.
- Mow our lawn instead of hiring someone to do it for you.
- Put in an extra hour of housework and really go at it.

UNION
CARBIDE

UNION CARBIDE CORPORATION
NUCLEAR DIVISION
P.O. BOX Y, OAK RIDGE, TENNESSEE 37830

BULK RATE
U.S. Postage
PAID
Permit #70
Union Carbide
Corporation



ADDRESS CORRECTION REQUESTED